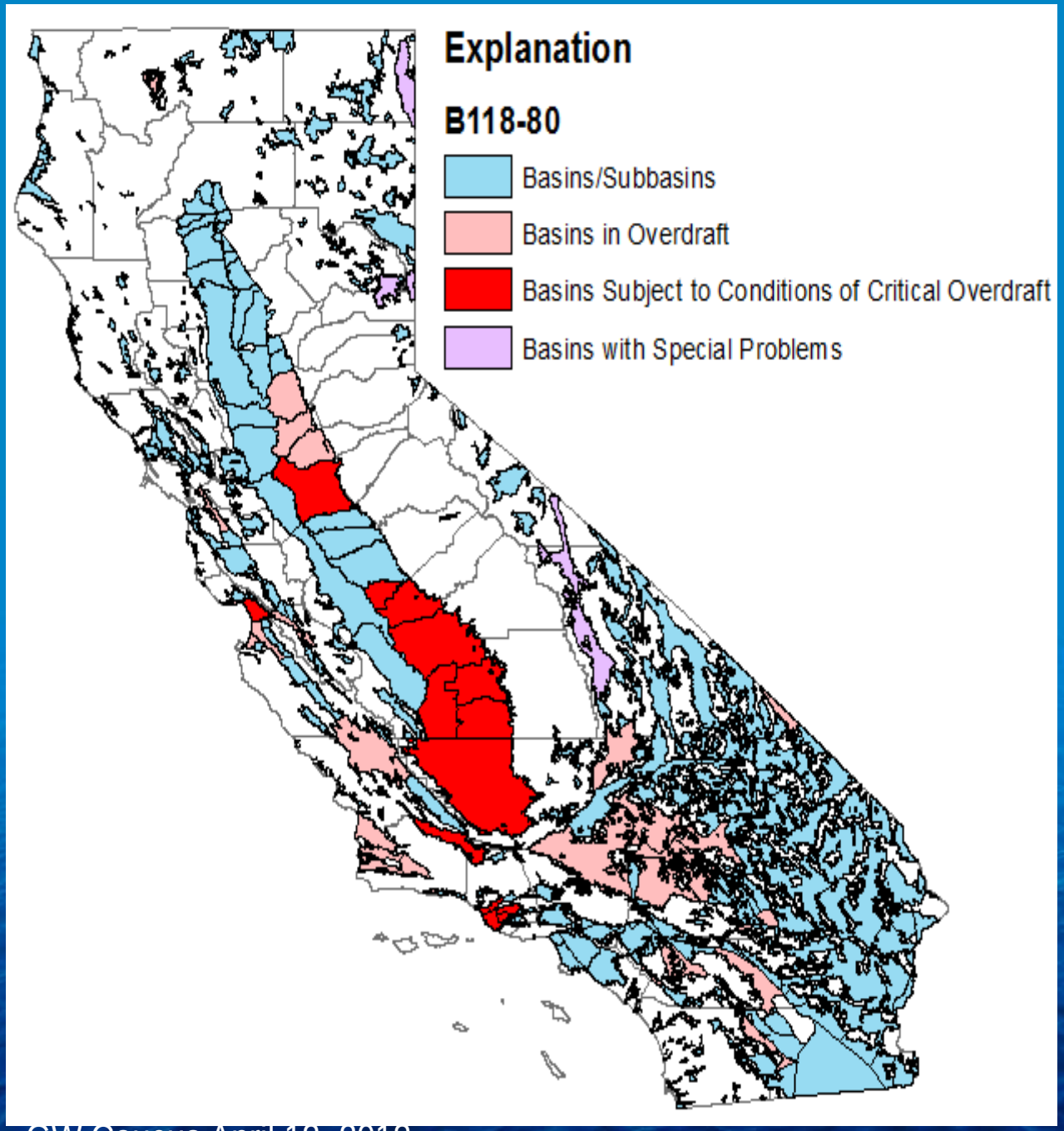
STRATEGIC POLICY RECOMMENDATIONS FOR CALIFORNIA'S GROUNDWATER: Straw Man for Discussion

Tim Parker, Co- Chair, Groundwater Caucus
Director, Groundwater Resources Association
Principal, Parker Groundwater

Strategic Policy Recommendations for California's Groundwater

SIX MAJOR THEMES

1. Advance Conjunctive Management by Enabling and Increasing Groundwater Recharge and Storage
2. Promote Best Practices in Groundwater Management through Groundwater Management and Planning Assessment
3. Conduct Statewide Groundwater Basin Assessment in Coordination with California Water Plan Five-Year Cycle
4. Promote Public Education in Groundwater
5. Increase Transparency of Groundwater Information
6. Protect and Enhance Groundwater Quality



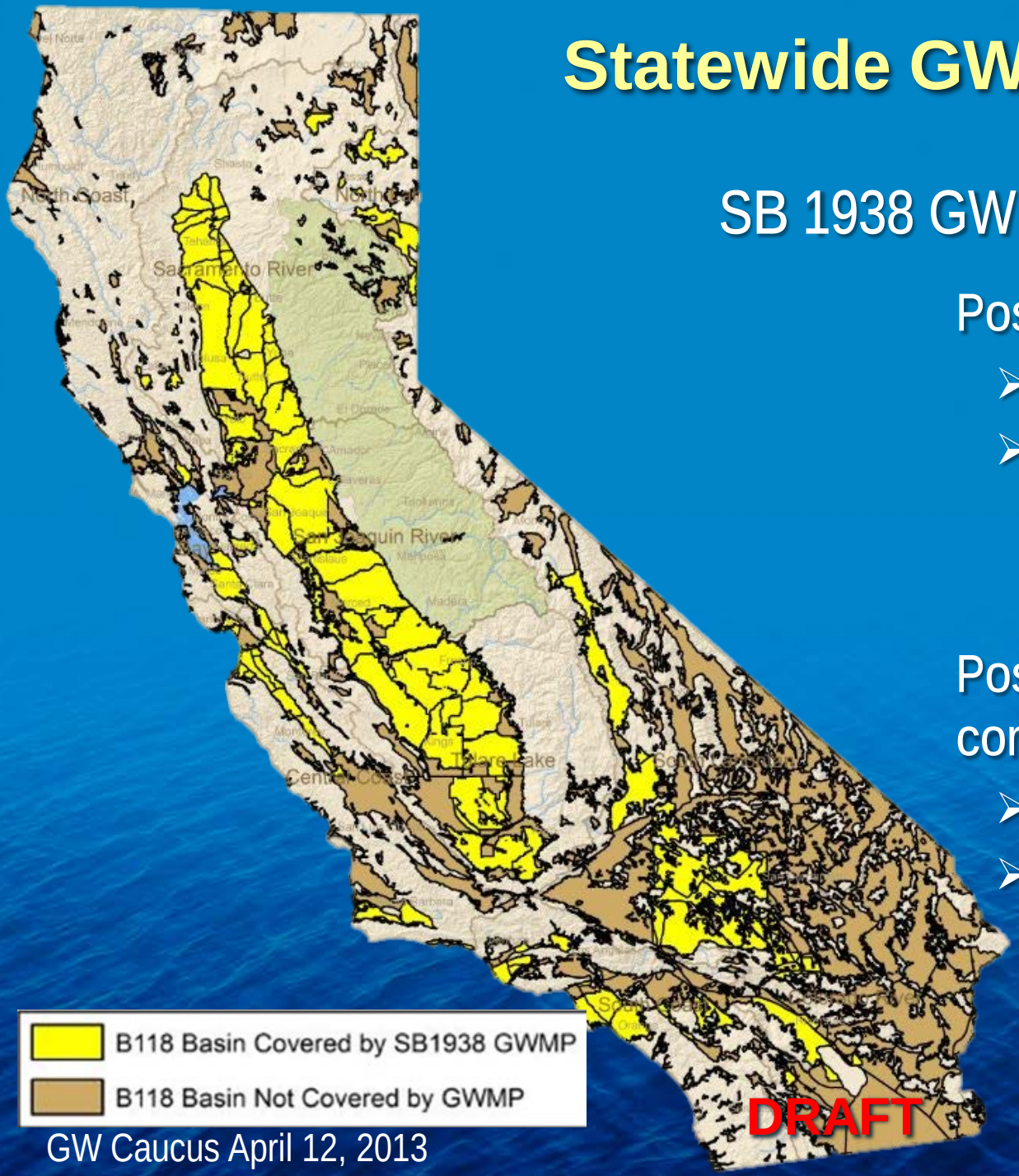
Basins Subject to Critical Conditions of Overdraft

Space for Storage & Need for Recharge

1) Advance Conjunctive Management by Enabling and Increasing Groundwater Recharge and Storage

a. Facilitate local groundwater recharge and storage projects through interagency alignment, improved interagency coordination and integrated water management
b. Develop and make accessible online a comprehensive inventory of existing groundwater recharge and storage projects and proposed future groundwater recharge and storage needs and potential
c. Catalogue and promote best science and technologies applied to groundwater recharge and storage through collaboration among State, federal and local agency leadership
d. Coordinate and align land use planning with groundwater recharge area protection
e. Compile available data, identify missing data needed to evaluate natural groundwater recharge, discharge, related ecosystems, and groundwater recharge and storage projects, and develop plan to fill identified data gaps to support evaluation of groundwater recharge and storage

Statewide GWMP Coverage



SB 1938 GWMPs and GW Basins

Post SB 1938 Plan (2002)

- GWMPs – 82 (70%)
- Coverage
  - 20,100 square miles
  - 32% of GW Basin area

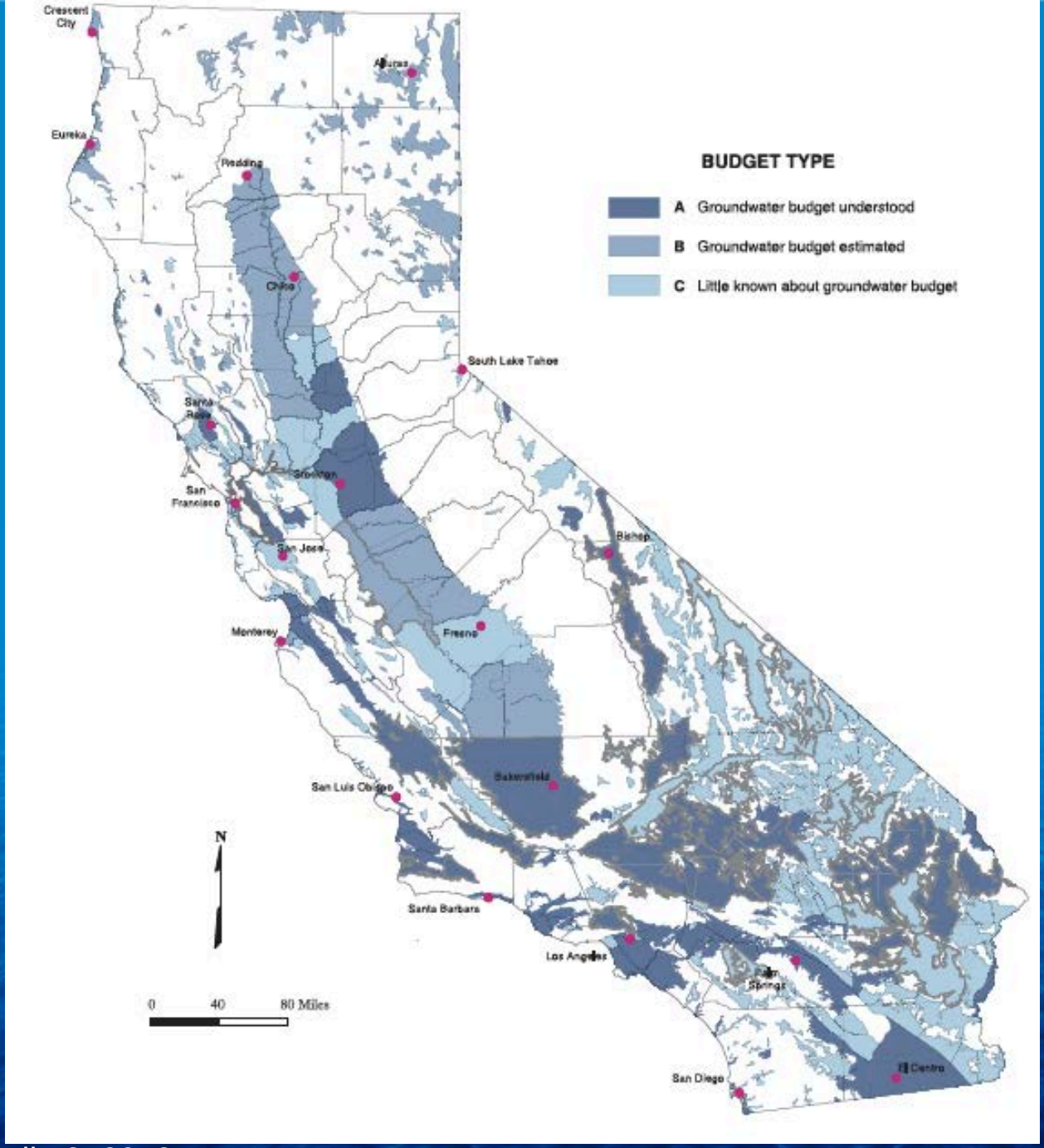
Post SB 1938 plan w reqrd components fully addrsd

- GWMPs – 35 (43%)
- Coverage
  - 10,300 square miles
  - 17% of GW Basin area

DRAFT

2) Promote Best Practices in Groundwater Management through Groundwater Management and Planning Assessment

a. Conduct outreach to regional and local agencies to identify and inventory existing Groundwater Management Plans (GWMP) to supplement and verify the inventory prepared by the Department of Water Resources
b. Work with signatory representatives of each GWMP to assess their GWMP and innovations in practices, and compliance with existing California Water Code requirements
c. Identify technical, legal, institutional, physical, and fiscal constraints associated with existing groundwater management programs and identify opportunities associated with groundwater management and planning activities
d. Develop groundwater management and planning and program implementation guidelines. The guidelines will provide a clear roadmap for GWMP development and implementation by identifying and clarifying components, processes, and standards and will include provisions for periodic review, reporting, updating, and amending as necessary to facilitate effective and sustainable groundwater management


BUDGET TYPE
A Groundwater budget understood
B Groundwater budget estimated
C Little known about groundwater budget
Crescent City
Eureka
Redding
Chico
South Lake Tahoe
Santa Rosa
San Francisco
San Jose
Monterey
Fresno
Bishop
Bakersfield
San Luis Obispo
Santa Barbara
Los Angeles
Palm Springs
El Centro
San Diego
N
0
40
80 Miles

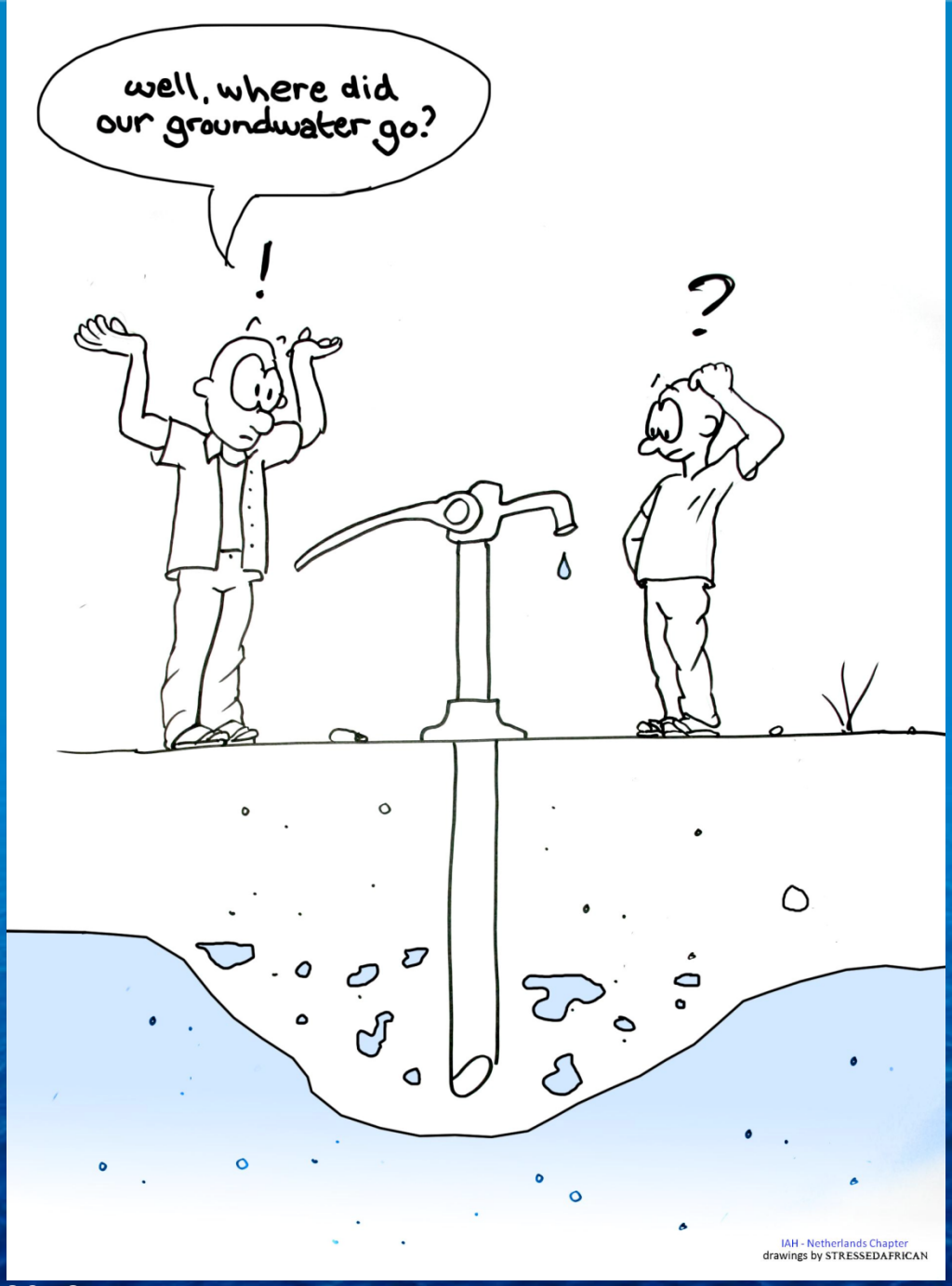
3) Conduct Statewide Groundwater Basin Assessments in Coordination with the California Water Plan Five-Year Cycle.

a. Utilize and build upon the CASGEM basin prioritization to determine the frequency and appropriate level of groundwater basin assessments required to facilitate sustainable groundwater management.

b. Synthesize and evaluate groundwater conditions for CASGEM high and medium priority groundwater basins with respect to groundwater levels, land subsidence, groundwater quality, surface water-groundwater interaction and related ecosystems, and groundwater recharge activities. Leverage and integrate data, information, analysis, and groundwater budgets developed by local, regional, State, and federal agencies, and non-governmental organizations. Work with local and regional agencies to develop a groundwater budget for the basin if one is lacking. Conduct this Task in coordination with State, federal, Tribal, and local groundwater management entities using outreach processes of the Water Plan.

c. Evaluate sustainability of groundwater resources for CASGEM high & medium priority basins by assessing long-term trends of groundwater levels, land subsidence, groundwater quality, groundwater management practices, and ecosystem services provided by groundwater. For this analysis, use model projections of groundwater conditions based on model simulations for future scenarios consistent with the California Water Plan scenarios. Conduct Task in coordination with State, federal, Tribal, & local groundwater management entities using outreach processes of the Water Plan.

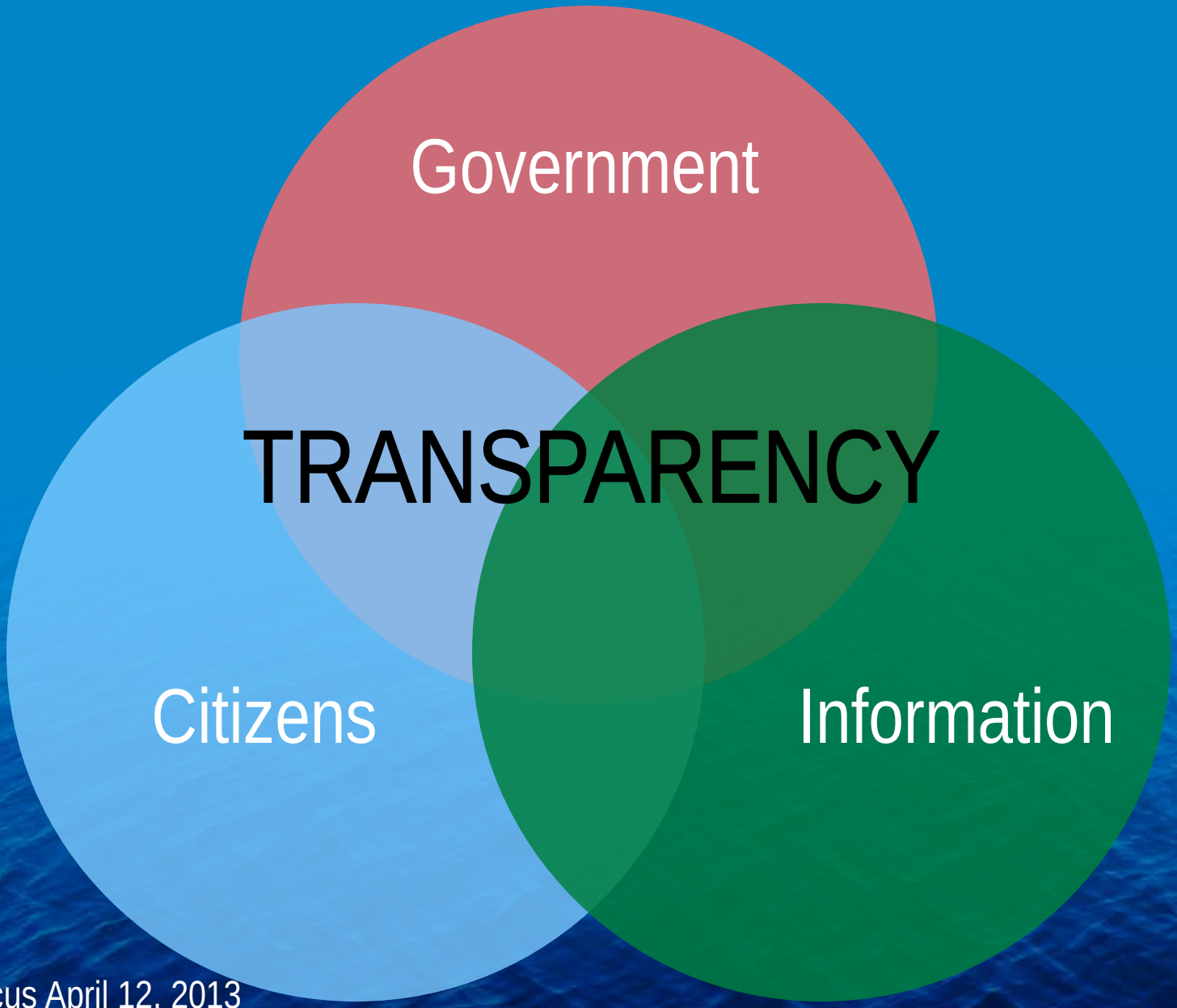
d. Make recommendations to improve coordination among State, federal, Tribal, and local agencies to improve understanding of the groundwater basins, adequately monitor the basins, and continue the effort to make groundwater information more readily available by enhancing CASGEM and other groundwater related activities.


well, where did our groundwater go?
!
?
IAH - Netherlands Chapter
drawings by STRESSEDAFRICAN

4) Promote Public Education in Groundwater

a. Establish an outreach effort jointly with State, federal, Tribal, local, and regional agencies and NGOs to educate the public on basic groundwater concepts, benefits of improving groundwater management, understanding of where their water comes from, and groundwater quality
b. Through these outreach efforts and other media activities, raise awareness among stakeholders and the public about the uncertainty and variability in groundwater supplies in a changing climate
c. Explain the benefits and constraints associated with the use of surface water and recycled water for groundwater recharge and storage, including trade-offs of potential water quality impacts versus water supply reliability and resiliency
d. Raise public awareness about the importance of groundwater quality protection and disseminate information to broaden community awareness about this issue

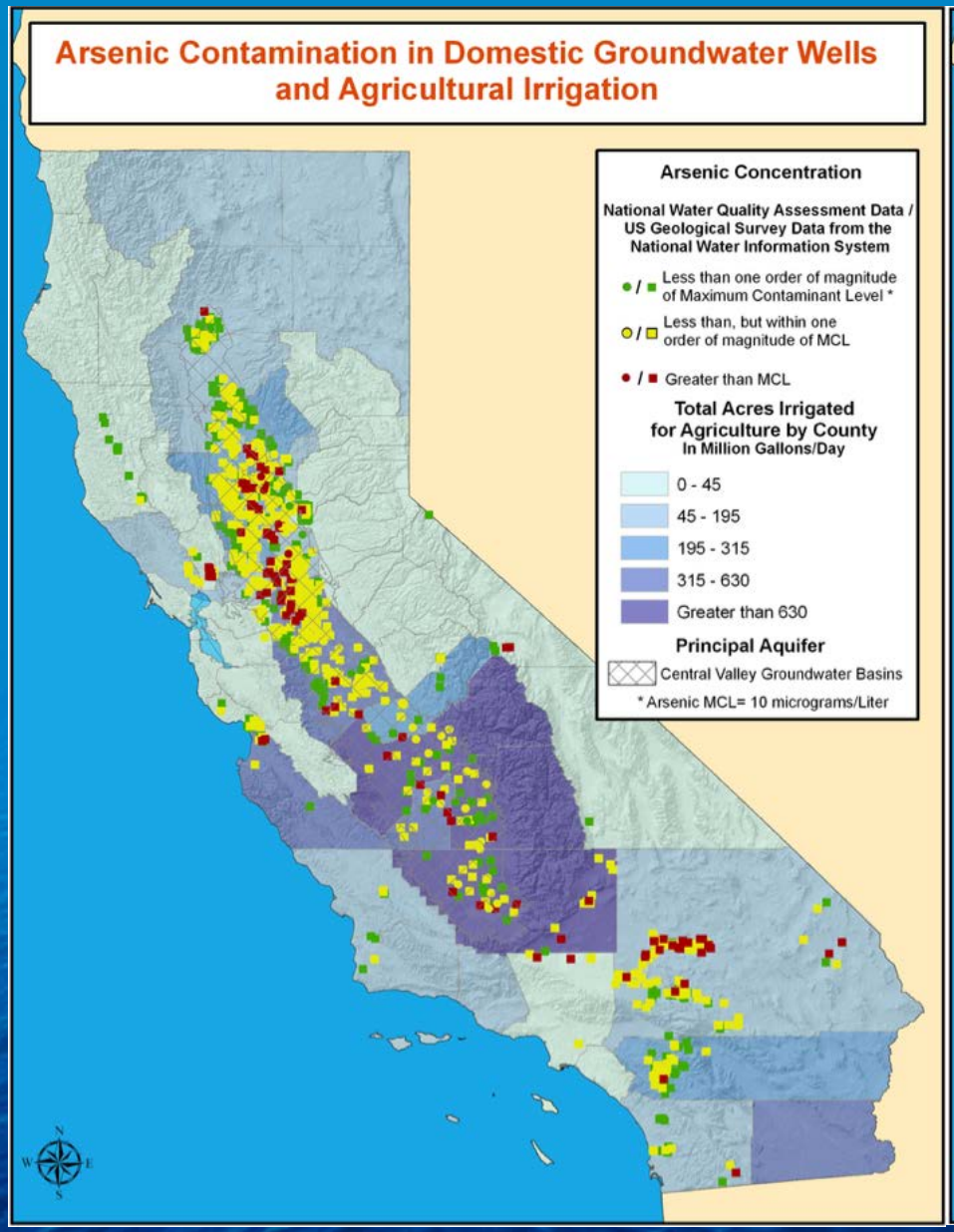
Increase Transparency



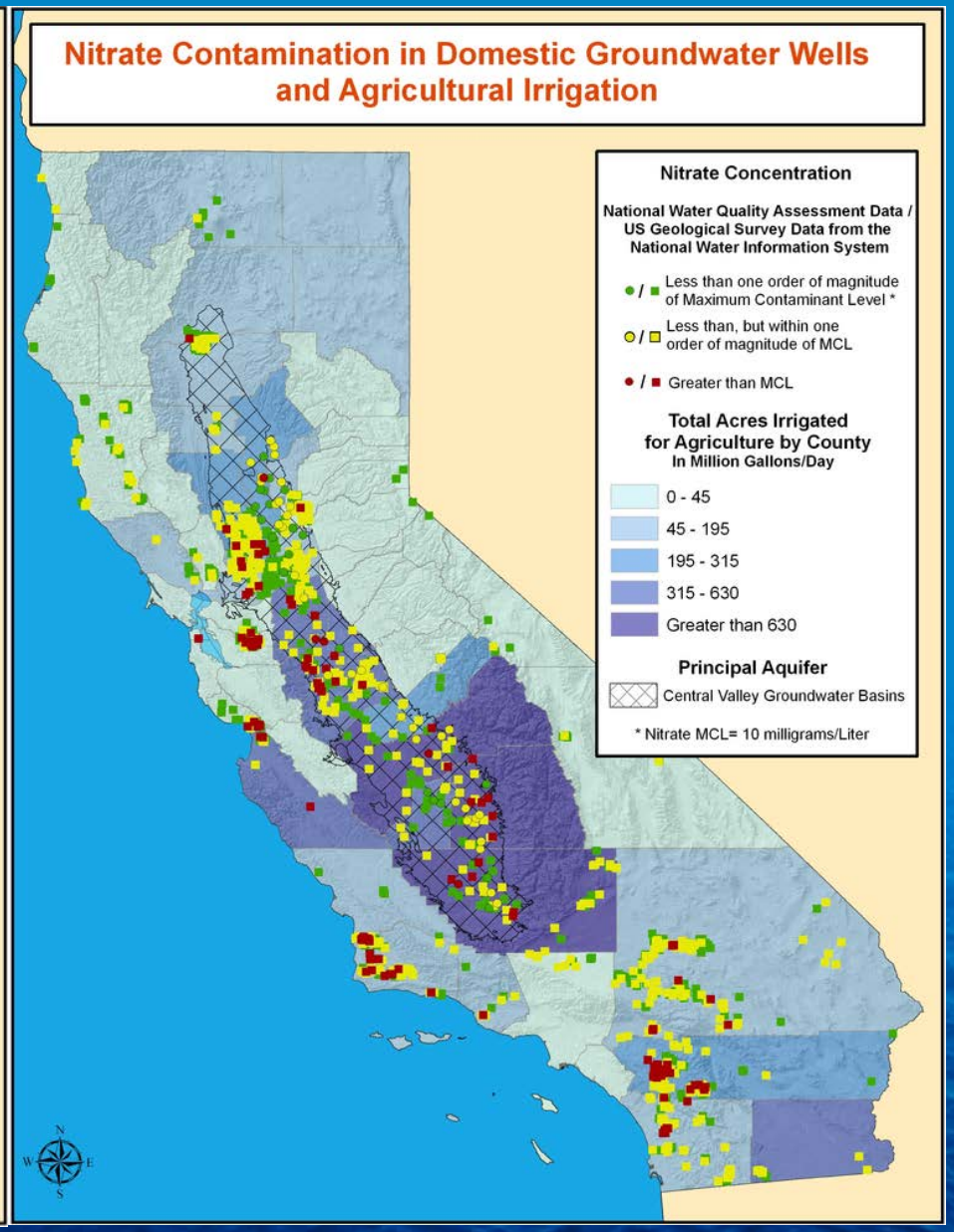
5) Increase Transparency of Groundwater Information

a. Increase public access to groundwater management planning and program activities, groundwater studies and recharge projects, and groundwater data
b. Make groundwater information easily accessible and understandable for a variety of audiences
c. Improve coordination among State agencies to disseminate groundwater information and use the appropriate and latest technology in aligning and improving public access to groundwater information

Arsenic Contamination in Domestic Groundwater Wells and Agricultural Irrigation



Nitrate Contamination in Domestic Groundwater Wells and Agricultural Irrigation



6) Protect and Enhance Groundwater Quality

a. Promote & facilitate coordinated efforts among federal, state, regional, & local programs on additional monitoring needs to address data gaps & water quality issues
b. Expand programs that enhance the understanding, measurement, and long-term management of salinity, nutrients, and other natural or human-influenced constituents on basin and watershed scales
c. Conduct long-term systematic monitoring and data evaluation in conjunction with baseline monitoring to identify future water quality trends
d. Improve modeling and assessment of nonpoint sources of contamination by scenario evaluations, integrated salt and nutrient transformations and transport models, and coupled optimization-simulation models to assess advantages and disadvantages of large-scale groundwater development
e. Coordinate with local environmental health departments to assess private wells used for domestic supply to better understand water quality concerns
f. Coordinate and align land use planning with groundwater quality protection and improvement
g. Support collaborative, crosscutting efforts to reuse/reduce waste that include whole-systems approaches, i.e., approaches that consider ecologic, energy, and other effects (beneficial or detrimental) related to air, land, surface water, and groundwater

QUESTIONS?

GROUP DISCUSSION TOPICS

Strategic Policy Recommendations for California's Groundwater
Thoughts on Six Major Themes

1. What other recommendations that are critical for California's groundwater should be added to the list, and why?

2. What recommendations in the list should not be included and why?

3. Any suggestions to reword the tasks to make them clearer and succinct?

Strategic Policy Recommendations for California's Groundwater
Thoughts on Specific Tasks for Each Theme

1. Do the specific tasks shown adequately describe the steps necessary to achieve the recommendation, and why?
2. What other tasks would you like to add?
3. Should any of the tasks be deleted or modified?
4. Any suggestions to reword the tasks to make them clearer and succinct?